



QUASIMEME

Quality assurance of information
for marine environmental monitoring

Certificate of Analysis



DSP shellfish toxins

REFERENCE MATERIAL

BT11 sample 28



Certificate of Analysis BT11 28

General Information

In this report an overview is given of analytical data for this sample collected in our proficiency testing program. The consensus values are calculated using a robust statistical model. With this NDA model mean and standard deviation are calculated using all reported data when at least 4 results are left after removal of reported 'lower than' (<) and 0 (= zero) values. No outliers are removed.

This report is divided into two sections: Consensus Values and Indicative Values. The division is made on the reliability of the data. Consensus Values are based on at least 10 results while the relative uncertainty is smaller than 6.25%. Indicative Values are based on a relative uncertainty of maximum 35% with at least 4 and less than 10 results or a relative uncertainty higher than 6.25%.

For each determinand the following parameters are given: mean, standard deviation, coefficient of variation, number of results, median, MAD (Median of Absolute Deviation) and the uncertainty in the assigned value. The confidence limits (at 95 % probability) are calculated for these determinands.

The results of each determinand is expressed on a wet weight basis.

Sample information

QUASIMEME reference materials cover a range of natural Shellfish toxins species from contaminated waters from the North Sea and/or Mediterranean.

This BT11 sample 28 of Mussel (*Mytilus Edulis*) from Marine Institute, Galway, Ireland is prepared for the QUASIMEME proficiency programs. The results on which the values in this report are based were taken from the periods given in the following table.

Year.Round	Program	Sample Round Id
2023.1	BT11	QST336BT
2020.2	BT11	QST292BT



Consensus Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
free-Okadaic-Acid	µg/kg	76.8	15.02	19.5	67	77.9	9.60	2.29	73.1	-	80.5
Free-DTX1	µg/kg	160	30.5	19.1	65	159	22.9	4.7	152	-	168
Free-DTX2	µg/kg	9.56	2.083	21.8	21	10.00	1.343	0.568	8.62	-	10.5
Total-free-OA+DTX1+DTX2	µg OA eq./kg	242	45.8	18.9	60	243	27.5	7.4	231	-	254
Total-Okadaic-Acid	µg/kg	350	57.9	16.5	67	341	36.1	8.8	336	-	365
Total-DTX1	µg/kg	215	52.7	24.5	66	219	36.5	8.1	202	-	228
Total-hy-OA+DTX1+DTX2	µg OA eq./kg	568	107.0	18.8	65	562	62.0	16.6	541	-	594
Total OA group + PTX group	µg OA eq./kg	566	107.7	19.0	52	562	62.8	18.7	536	-	596
YTX	mg/kg	0.143	0.0305	21.3	66	0.141	0.0205	0.0047	0.136	-	0.151
homo-YTX	mg/kg	0.0268	0.0061	22.8	35	0.0275	0.0035	0.0013	0.0247	-	0.0289
Total-YTX	mg YTX eq./kg	0.219	0.0676	31.0	56	0.230	0.0395	0.0113	0.200	-	0.237



Indicative Values BT11

Method: Toxins(SF) - BT11

Element	Unit	Mean	Std.Dev.	CV %	N	Median	MAD	Uncertainty	95 % confidence limits		
Total-DTX2	µg/kg	8.83	5.041	57.1	19	12.50	3.480	1.446	6.41	-	11.2
AZA-1	µg/kg	5.30	2.593	48.9	30	5.60	1.845	0.592	4.33	-	6.26
AZA-2	µg/kg	4.66	1.485	31.9	23	4.90	1.015	0.387	4.02	-	5.30
AZA-3	µg/kg	7.14	2.869	40.2	29	7.22	1.680	0.666	6.05	-	8.23
AZA-total	µg AZA eq./kg	21.7	7.61	35.1	30	22.7	4.60	1.74	18.9	-	24.5
45-OH-homo-YTX	mg/kg	0.0103	0.0105	102.6	16	0.0172	0.0077	0.0033	0.0047	-	0.0158
45-OH-YTX	mg/kg	0.0676	0.0282	41.7	42	0.0725	0.0176	0.0054	0.0588	-	0.0764